MYSORE STATE RAILWAYS.

No. 4—Ry. 1-11-12, dated 1st July 1911.

Under Section 31 of the Mysore Railway Regulation, 1894, the Government of His Highness the Maharaja of Mysore sanction the adoption, on the Railways over which the Durbar have jurisdiction, of the amendments in Appendix A, Part II of the General Rules for working open lines of Railway—Rules to regulate the packing and carriage by railway in India of certain compressed gases—referred to in the Notifications of the Government of India, Railway Department (Railway Board), Nos. 59 and 122, dated the 1st March and 5th May 1911, respectively, published in Part I of the *Gazette of India*.

The amendments as sanctioned above are published for general information.

By Order,
M. VISVESVARAYA,
Secretary for Railways,
Government of Mysore.

The 1st March 1911.

No. 59.—The following is published for general information :—

Circular No. 305 R. T.

GOVERNMENT OF INDIA.

RAILWAY DEPARTMENT

(RAILWAY BOARD.)

Calcutta, the 24th February 1911.

Amendments in Appendix A, Part II of the General Rules for working open lines of railway.—Rules to regulate the packing and carriage by railway in India of certain compressed gases.

READ—

Section 47 of the Indian Railways Act, 1890 (IX of 1890).

Government of India, Department of Commerce and Industry, Notification No. 801, dated the 24th March 1905.

Railway Board's Notification No. 183, dated the 8th September 1906, and Railway Board's Circular No. R. T. 89 A.—5, dated the 8th September 1906.

Railway Board's Notification No. 228, dated the 19th September 1907, and Railway Board's Circular No. 997 R. T., dated the 12th September 1907.

RESOLUTION.—The rules to regulate the packing and carriage by railway in India of certain compressed gases, which were promulgated with the Railway Board's Circular No. 997 R. T., dated the 12th September 1907, were based on those in force in England, subject to such modifications as the altered physical conditions of this country required; but it is also considered necessary to embody in the rules the regulations for testing the cylinders, which are in force in England, so as to guard against the transport of cylinders which are not of the standard design.

2. In exercise, therefore, of the powers conferred by the Notification of the Government of India in the Department of Commerce and Industry, No. 801, dated the 24th March 1905, read in the preamble above, the Railway Board sanction, under Section 47, Sub-Sections (1) and (4), of the Indian Railways Act, 1890 (IX of 1890), as in force in British India or as locally applied, the adoption by the administrations of all lines of railway administered by the Government of the amendments specified in the annexure hereto in the General Rules for working open lines of railway, which were promulgated with Railway Board's Circular No. R. T. 89-A—5, dated the 8th September 1906.

3. The Railway Board also desire that the administrations of the several railways not administered by Government will submit formal application for the adoption of the said amendments on their respective lines.

ORDER.—Ordered that this circular, with the accompanying amendments, be published under a notification in Part I of the *Gazette of India*, as required by Section 47, sub-section (3), of the Indian Railways Act, 1890 (IX of 1890), and that a copy thereof be kept open for inspection at railway stations as directed by sub-section (6) of the same section; also that a copy of this circular and of its enclosure be communicated to the Local Governments and Administrations and to the Officers noted on the margin, for information and necessary action, and to the Managers, North Western, Oudh and Rohilkhand and Eastern Bengal (State) Railways, the Senior Government Inspectors of Railways, Circles Nos. 1 to 7, and the Secretary, Indian Railway Conference Association, for information.

The Governments of Bengal, the United Provinces, and Eastern Bengal and Assam, Public Works Department.
The Government of Bengal, Marine Department.
The Secretary to the Honourable the Agent to the Governor-General for Rajputana, Public Works Department.
The Agents, Assam-Bengal, Barsi Light, Bengal and North-Western, Bengal-Nagpur, Bombay, Baroda and Central India, Burma, East Indian, Great Indian Peninsula, Madras and Southern Mahratta, Rohilkhand and Kumaon, and South Indian Railway Companies.
The Agent and Manager, His Highness the Nizam's Guaranteed State Railways Company (through the Honourable the Resident at Hyderabad).
The Managers and Engineers-in-Chief, Bengal-Dooars, and Bhavnagar-Gondal-Junagad-Porbandar Railways.
The Manager and Executive Engineer, Morvi Railway.
The Chief Engineer, Cutch State Railway.

[Enclosure to the Government of India, Railway Department (Railway Board) Circular No. 305 R. T., dated the 24th February 1911.]

For rule 10, sub-rule (2) in Appendix A, *substitute* the following:—

(2) Cylinders must be made of wrought iron or mild steel of the best quality, containing not more than 0·25 per centum of carbon and must comply in every other respect with the recommendations made by the Departmental Committee on compressed gas cylinders appointed by the Secretary of State for the Home Department in 1895, and must not exceed 8 feet in length and 10 inches in diameter.

Special attention is directed to the following extract from the recommendations of the Departmental Committee.

SUMMARY OF RECOMMENDATIONS.

I.—CYLINDERS OF COMPRESSED GAS (OXYGEN, HYDROGEN, OR COAL GAS).

(*a*) *Lap-welded wrought iron.*—Greatest working pressure, 120 atmospheres, or 1,800 lbs. per square inch.

Stress due to working pressure not to exceed 6½ tons per square inch.

Proof pressure in hydraulic test, after annealing, 224 atmospheres, or 3,360 lbs. per square inch.

Permanent stretch in hydraulic test not to exceed 10 per cent of the elastic stretch.

One cylinder in 50 to be subjected to a statical bending test, and to stand crushing nearly flat between two rounded knife edges without cracking.

(*b*) *Lap-welded or seamless steel.*—Greatest working pressure, 120 atmosphere, or 1,800 lbs. per square inch.

Stress due to working pressure not to exceed 7½ tons per square inch in lap-welded, or 8 tons per square inch in seamless cylinders.

Carbon in steel not to exceed 0·25 per cent., or iron to be less than 99 per cent.

Tenacity of steel not to be less than 26 or more than 33 tons per square inch. Ultimate elongation not less than 1·2 inches in 8 inches. Test bar to be cut from finished annealed cylinder.

Proof pressure in hydraulic test, after annealing, 224 atmospheres, or 3,360 lbs. per square inch.

Permanent stretch shown by water jacket not to exceed 10 per cent of elastic stretch.

One cylinder in 50 to be subjected to a statical bending test and to stand crushing nearly flat between rounded knife edges without cracking.

Regulations applicable to all cylinders.

Cylinders to be marked with a rotation number, a manufacturer's or owner's mark, an annealing mark with date, a test mark with date. The marks to be permanent and easily visible.

Testing to be repeated at least every two years, and annealing at least every four years.

A record to be kept of all tests.

Cylinders which fail in testing to be destroyed or rendered useless.

Hydrogen and coal gas cylinders to have left-handed threads for attaching connections, and to be painted red.

The compressing apparatus to have two pressure gauges and an automatic arrangement for preventing overcharging. The compressing apparatus for oxygen to be wholly distinct and unconnected with the compressing apparatus for hydrogen and coal gas.

Cylinders not to be refilled till they have been emptied.

If cylinders are sent out unpacked, the valve fittings should be protected by a steel cap.

A minimum weight to be fixed for each size of cylinder in accordance with its required thickness. Cylinders of less weight to be rejected.

II.—CYLINDERS FOR CARBONIC ACID.

Greatest working pressure to be reckoned as 120 atmospheres.

Cylinders to be of lap-welded wrought iron, lap-welded steel or seamless steel. Stresses, tests, and conditions as to repetition of tests to be the same as for oxygen cylinders.

The marking to be the same with the addition of the weight of the cylinder empty, and the greatest permissible weight of carbonic acid it may contain.

No cylinder to contain more than $\frac{3}{4}$ lb. of carbonic acid per pound of water capacity, if for this country (*i.e., England*), or $\frac{2}{3}$ lb. per pound of water capacity, if for the tropics.

If cylinders are sent out unpacked, the valve fittings should be protected by a steel cap.

A notice should be affixed to the cylinder that it contains carbonic acid, and that it should be kept cool and not exposed to the sun or the heat of a stove.

III.—CYLINDERS FOR AMMONIA.

Greatest working pressure to be reckoned as 1,000 lbs. per square inch.

Hydraulic test pressure 1,500 lbs. per square inch.

Greatest working stress 7 tons per square inch for steel, and 6 tons per square inch for wrought iron.

In other respects the material, tests, and rule for repetition of tests to be the same as for oxygen cylinders.

The marking to be similar to that for oxygen cylinders, but the weight of cylinder empty and the greatest permissible weight of ammonia it may contain to be added.

Ammonia cylinders should not contain more than 0·5 lb. per pound of water capacity.

If cylinders are sent out unpacked the valve fittings should be protected by a steel cap.

A notice should be affixed to the cylinder that it contains ammonia, and that it should be kept cool and not exposed to the sun or the heat of a stove.

IV.—CYLINDER FITTINGS.

No oil or similar lubricant to be used for cylinder valves, pressure gauges, regulators, or other fittings.

Pressure gauges to have a check to prevent a sudden inrush of gas.

Pressure gauges for hydrogen and coal gas to have left-handed screws, and to be painted red.

For the Form of Certificate prescribed in rule *10*, sub-rule (*7*), *substitute* the following:—

Form of Certificate.

Certified that the cylinder/cylinders containing _____ tendered by me/us as per forwarding Order No._____of this date to the_____Railway for despatch to_____Station has/have been packed and tested in accordance, and that the cylinder complies/cylinders comply in every other respect, with the rules in Appendix A, Part II of the General Rules for working open lines of railway.

I/We also certify that the pressure in the cylinder/cylinders containing Compressed Air/Coal gas/Hydrogen/Oxygen is not greater than 1,800 lbs. per square inch.

Signature of sender/senders_____

R. C. F. VOLKERS,
Secretary, Railway Board.

No. 122.—The following is published for general information:

No. 604—R. T., dated the 28th April 1911.

RESOLUTION—By the Railway Board.

Adoption on the Arrah-Sasaram Light, Assam-Bengal Baraset-Basirhat Light, Bengal and North-Western, Bengal Provincial, Bukhtiarpur-Behar Light, Burma, Darjeeling-Himalayan, Howrah-Amta Light, Howrah-Sheakhala Light, Rohilkund and Kumaon and Shahdara (Delhi)-Saharanpur Light, Railways, and on such portions of the Bengal Dooars, Bengal-Nagpur, Bhavnagar State, Bombay, Baroda and Central India, East Indian, His Highness the Nizam's Guaranteed State, Jodhpur-Bikaner, Madras and Southern Mahratta, and South Indian Railway systems as are situate in British territory, of amendments in Appendix A, Part II of the General Rules of 1906, for working open lines of railway—Rules to regulate the packing and carriage by railway in India of certain compressed gases.

READ—

Section 47 of the Indian Railways Act, 1890 (IX of 1890).

Government of India, Department of Commerce and Industry, Notification No. 801, dated the 24th March 1905.

Railway Board's Notification No. 183, dated the 8th September 1906, and Railway Board's Circular No. R. T. 89-A.—5, dated the 8th September 1906.

Railway Board's Notification No. 97, dated the 24th April 1907, and Railway Board's Resolution No. 35 R. T., dated the 17th April 1907.

Railway Board's Notification No. 102, dated the 1st May 1907, and Railway Board's Resolution No. 76 R. T., dated the 22nd April 1907.

Railway Board's Notification No. 105, dated the 9th May 1907, and Railway Board's Resolution No. 148 R. T., dated the 3rd May 1907.

Railway Board's Notification No. 135, dated the 6th June 1907, and Railway Board's Resolution No. 330 R. T., dated the 30th May 1907.

Railway Board's Notification No. 136, dated the 7th June 1907, and Railway Board's Resolution No. 296 R. T., dated the 27th May 1907.

Railway Board's Notification No. 141, dated the 11th June 1907, and Railway Board's Resolution No. 346 R. T., dated the 1st June 1907.

Railway Board's Notification No. 143, dated the 12th June 1907, and Railway Board's Resolution No. 367 R. T., dated the 6th June 1907.

Railway Board's Notification No. 150, dated the 18th June 1907, and Railway Board's Resolution No. 383 R. T., dated the 10th June 1907.

Railway Board's Notification No. 171, dated the 12th July 1907, and Railway Board's Resolution No. 599 R. T., dated the 10th July 1907.

Railway Board's Notification No. 172, dated the 15th July 1907, and Railway Board's Resolution No. 585 R. T., dated the 9th July 1907.

Railway Board's Notification No. 214, dated the 10th September 1907, and Railway Board's Resolution No. 966 R. T., dated the 6th September 1907.

Railway Board's Notification No. 228, dated the 19th September 1907, and Railway Board's Resolution No. 997 R. T., dated the 12th September 1907.

Railway Board's Notification No. 239, dated the 27th September 1907, and Railway Board's Resolution No. 1070 R. T., dated the 26th September 1907.

Railway Board's Notification No. 240, dated the 27th September 1907, and Railway Board's Resolution No. 1079 R. T., dated the 27th September 1907.

Railway Board's Notification No. 267, dated the 22nd October 1907, and Railway Board's Resolution No. 1213 R. T., dated the 16th October 1907.

Railway Board's Notification No. 278, dated the 28th October 1907, and Railway Board's Resolution No. 1265 R. T., dated the 23rd October 1907.

Railway Board's Notification No. 281, dated the 31st October 1907, and Railway Board's Resolution No. 1287 R. T., dated the 26th October 1907.

Railway Board's Notification No. 282, dated the 31st October 1907, and Railway Board's Resolution No. 1286 R. T., dated the 26th October 1907.

Railway Board's Notification No. 283, dated the 31st October 1907, and Railway Board's Resolution No. 1289 R. T., dated the 26th October 1907.

Railway Board's Notification No. 284, dated the 31st October 1907, and Railway Board's Resolution No. 1276 R. T., dated the 25th October 1907.

Railway Board's Notification No. 290, dated the 1st November 1907, and Railway Board's Resolution No. 1305 R. T., dated the 30th October 1907.

Railway Board's Notification No. 311, dated the 23rd November 1907, and Railway Board's Resolution No. 1379 R. T., dated the 18th November 1907.

Railway Board's Notification No. 325, dated the 28th November 1907, and Railway Board's Resolution No. 1403 R. T., dated the 23rd November 1907.

Railway Board's Notification No. 336, dated the 10th December 1907, and Railway Board's Resolution No. 1476 R. T., dated the 5th December 1907.

Railway Board's Notification No. 241, dated the 12th December 1907, and Railway Board's Resolution No. 1488 R. T., dated the 6th December 1907.

Railway Board's Notification No. 17, dated the 22nd January 1908, and Railway Board's Resolution No. 129 R. T., dated the 18th January 1908.

Railway Board's Notification No. 57, dated the 27th February 1908, and Railway Board's Resolution No. 422 R. T., dated the 24th February 1908.

Railway Board's Notification No. 69, dated the 5th March 1908, and Railway Board's Resolution No. 452 R. T., dated the 28th February 1908.

Railway Board's Notification No. 96, dated the 27th March 1908, and Railway Board's Resolution No. 553 R. T., dated the 19th March 1908.

Railway Board's Notification No. 108, dated the 16th April 1908, and Railway Board's Resolution No. 638 R. T., dated the 9th April 1908.

Railway Board's Notification No. 157, dated the 27th May 1908, and Railway Board's Resolution No. 903 R. T., dated the 22nd May 1908.

Railway Board's Notification No. 190, dated the 30th June 1908, and Railway Board's Resolution No. 1165 R. T., dated the 25th June 1908.

Railway Board's Notification No. 53, dated the 22nd February 1911, and Railway Board's Resolution No. 227 R. T., dated the 13th February 1911.

READ ALSO—

Letter No. 547-I—T., dated the 6th March 1911, from the Agent, Madras and Southern Mahratta Railway.

Letter No. 4532-R., dated the 7th March 1911, from the Agent, Bengal-Nagpur Railway.

Letter No. 2943-W—16-20, dated the 13th March 1911, from the Agent, Bengal and North-Western Railway.

Letter No. 1919-W—19, dated the 14th March 1911, from the Agent, Rohilkund and Kumaon Railway.

Letter No. 3772-T., dated the 15th March 1911, from the Agent, Bombay, Baroda and Central India Railway,

Letter No. S. T. 26-1101, dated the 16th March 1911, from the Manager and Engineer-in-Chief, Bengal-Dooars Railway.

Letter No. G. 931-4 (22), dated the 18th March 1911, from the Manager and Engineer-in-Chief, Bhavnagar-Gondal-Junagad-Porbandar Railway.

Letter No. 331-T., dated the 20th March 1911, from the Agent, East Indian Railway.

Letter No. 1967, dated the 20th March 1911, from the First Assistant Resident, Hyderabad.

Letter No. 3184—12-32-G., dated the 20th March 1911, from the Agent, Burma Railways.

Letter No. 543-R., dated the 22nd March 1911, from the Secretary to the Government of Bengal, Railway Department.

Letter No. 555-R., dated the 23rd March 1911, from the Secretary to the Government of Bengal, Railway Department.

Letter No. 56-3—3991, dated the 24th March 1911, from the Manager, Jodhpur-Bikaner Railway.

Letter No. 2798, dated the 24th March 1911, from the Agent, Assam-Bengal Railway.

Letter No. A. T.-1047—63 (d)—47, dated the 24th March 1911, from the Agent, South Indian Railway.

Letter No. 597-R., dated the 28th March 1911, from the Secretary to the Government of Bengal, Railway Department.

Letter No. 214—9-R., dated the 1st April 1911, from the Under Secretary to the Government of the United Provinces, Public Works Department.

RESOLUTION:—The Administrations of the several railways, not administered by Government, which are noted on the margin, have recommended the adoption on those railways of the amendments specified in the enclosure to *Railway* Board's Circular No. 305 R. T., dated the 24th February 1911, and published under their Notification No. 59, dated the *1st* March 1911, in Appendix A, Part II of the General Rules of 1906, for working open lines of railway in British India, which rules were sanctioned for adoption on the marginally noted railways and on such portions of the Bengal-Dooars, Bengal-Nagpur, the late Bhavnagar--Gondal--Junagad-Porbandar, Bombay, Baroda and Central India, East Indian, His Highness the Nizam's Guaranteed State, Jodhpur-Bikaner, Madras and Southern Mahratta and South Indian Railway systems as are situate in British territory in the following Railway Board's resolutions—

Arrah-Sasaram Light Railway.
Assam-Bengal Railway.
Baraset-Basirhat Light Railway.
Bengal and North-Western Railway.
Bengal-Dooars Railway.
Bengal-Nagpur Railway.
Bengal Provincial Railway.
(Late) Bhavnagar-Gondal-Junagad-Porbandar Railway.
Bombay, Baroda and Central India Railway.
Bukhtiarpur-Behar Light Railway.
Burma Railways.
Darjeeling-Himalayan Railway.
East Indian Railway.
His Highness the Nizam's Guaranteed State Railway.
Howrah-Amta Light Railway.
Howrah-Sheakhala Light Railway.
Jodhpur-Bikaner Railway.
Madras and Southern Mahratta Railway.
Rohilkund and Kumaon Railway.
Shahdara (Delhi)-Saharanpur Light Railway.
South Indian Railway.

Arrah-Sasaram Light, Assam-Bengal, Baraset-Basirhat Light, Bukhtiarpur-Behar Light, Howra-Amta Light Howrah-Sheakhala Light, Bengal and North-Western, Bengal Provincial, Burma, Darjeeling-Himalayan, Rohilkund and Kumaon and Shahdara-(Delhi)-Saharanpur Light Railways.

No. 227 R. T., dated the 13th February 1911,

Nos. 76 R. T. and 1488 R. T., dated, respectively, the 22nd April and 6th December 1907,

No. 1305 R. T., dated the 30th October 1907,

No. 1379 R. T., dated the 18th November 1907,

Nos. 367 R. T. and 1287 R. T., dated respectively, the 6th June and 26th October 1907,

Nos. 599 R. T. and 1265 R. T., dated, respectively, the 10th July and 23rd October 1907,

Nos. 553 R. T. and 1165 R. T., dated, respectively, the 19th March and 25th June 1908,

No. 422 R. T., dated the 24th February 1908,

No. 1079 R. T., dated the 27th September 1907,

Nos. 1070 R. T. and 638 R. T., dated, respectively, the 26th September 1907 and 9th April 1908,

Nos. 585 R. T. and 1289 R. T., dated, respectively, the 9th July and 26th October 1907,

Nos. 148 R. T. and 1213 R. T., dated, respectively, the 3rd May and 16th October 1907,

Nos. 383 R. T. and 129 R. T., dated, respectively, the 10th June 1907 and 18th January 1908,

Nos. 35 R. T. and 1286 R. T., dated, respectively, the 17th April and 26th October 1907,

Nos. 296 R. T. and 452 R. T., dated, respectively, the 27th May 1907 and 28th February 1908,

Nos. 966 R. T. and 1276 R. T., dated, respectively, the 6th September and 25th October 1907,

Nos. 330 R. T., 346 R. T., 1403 R. T. and 1476 R. T., dated, respectively, the 30th May, 1st June, 23rd November and 5th December 1907,

No. 903 R. T., dated the 22nd May 1908,

read in the preamble above.

2. In exercise of the powers conferred by the Notification of the Government of India in the Department of Commerce and Industry, No. 801, dated the 24th March 1905, read in the preamble above, the Railway Board sanction, under section 47, sub-sections (1), (3) and (4), of the Indian Railways Act, 1890 (IX of 1890), the adoption of the amendments cited in paragraph 1 above, on each of the railways noted on the margin and on such portions of the Bengal-Dooars, Bengal-Nagpur, Bhavnagar State, Bombay, Baroda and Central India, East Indian, His Highness the Nizam's Guaranteed State, Jodhpur-Bikaner, Madras and Southern Mahratta, and South Indian Railway systems as are situate in British territory, the sanction in the case of the Bengal Provincial Railway to have effect from 1st July 1911.

Arrah-Sasaram Light, Assam-Bengal, Baraset-Basirhat Light, Bengal and North-Western, Bengal Provincial, Bukhtiarpur-Behar Light, Burma, Darjeeling-Himalayan, Howrah-Amta Light, Howrah-Sheakhala Light, Rohilkund and Kumaon and Shahdara (Delhi)-Saharnpur Light Railways.

ORDER.—Ordered, that this resolution be published under a notification in Part I of the *Gazette of India* as required by section 47, sub-section (3), of the Indian Railways Act, 1890 (IX of 1890), and that a copy of the amended General Rules be kept open for inspection at railway stations as directed by sub-section (6) of the same section; also that a copy of this resolution be communicated to the Local Governments and Administrations and to the officers noted on the margin, for information.

The Government of Bengal, Railway Department.
The Government of the United Provinces, Public Works Department.
The Hon'ble the Agent to the Governor-General, Rajputana.
The Agents, Assam-Bengal, Bengal and North-Western, Bengal-Nagpur, Bombay, Baroda and Central India, Burma East Indian, Madras and Southern Mahratta, Rohilkhund and Kumaon, and South Indian Railways.
The Agent and Manager, His Highness the Nizam's Guaranteed State Railways Company (through the Honourable the Resident at Hyderabad).
Manager, Bhavnagar State Railway.
The Manager and Engineer-in-Chief, Bengal-Dooars Railway.
The Senior Government Inspectors of Railways, Circles Nos. 1 to 3, 5, 6 and 7.
The Secretary, Indian Railway Conference Association.

R. C. F. VOLKERS,
Secretary, Railway Board.